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SJC-12483

COMMONWEALTH vs. JAMIE B. JOHNSON.

Plymouth. September 5, 2018. - March 26, 2019.

Present: Gants, C.J., Lenk, Gaziano, Lowy, Budd, Cypher, & Kafker, JJ.

Breaking and Entering. Larceny. Global Positioning System Device. Constitutional Law, Search and seizure. Search and Seizure, Probationer, Expectation of privacy. Practice, Criminal, Motion to suppress, Probation.

Indictments found and returned in the Superior Court Department on March 14, 2014.

A pretrial motion to suppress evidence was heard by Cornelius J. Moriarty, II, J., and the cases were heard by Jeffrey A. Locke, J.

The Supreme Judicial Court granted an application for direct appellate review.

Timothy St. Lawrence for the defendant.

Gail M. McKenna, Assistant District Attorney (Brian S. Fahy, Assistant District Attorney, also present) for the Commonwealth.

Matthew Spurlock, Committee for Public Counsel Services, for Committee for Public Counsel Services & another, amici curiae, submitted a brief.

Maura Healey, Attorney General, & Sarah M. Joss, Special Assistant Attorney General, for Massachusetts Probation Service, amicus curiae, submitted a brief.

KAFKER, J. Following a jury-waived trial, the defendant was convicted of two counts of breaking and entering in the daytime, G. L. c. 266, § 18; one count of breaking and entering in the nighttime, G. L. c. 266, § 16; two counts of larceny over \$250, G. L. c. 266, § 30; and one count of larceny of \$250 or less, G. L. c. 266, § 30. At trial, the Commonwealth produced evidence matching the time and location of these crimes to historical global positioning system (GPS) location data recorded from the GPS monitoring device (GPS device) that was attached to the defendant as a condition of his probation. Before trial, the defendant had moved to suppress this evidence, arguing that the Commonwealth's act of accessing and reviewing this GPS location data was an unreasonable search under the Fourth Amendment to the United States Constitution and art. 14 of the Massachusetts Declaration of Rights. The motion was denied.

On appeal, the defendant claims that (i) the motion judge erred in denying his motion to suppress after concluding that the Commonwealth did not commit a search in the constitutional sense when it accessed the historical GPS location data recorded from the defendant's GPS device without a warrant, and (ii) the

evidence at trial was not sufficient to support the defendant's convictions on the charge of breaking and entering in the nighttime and one of the charges of larceny over \$250.

For the reasons stated below, we conclude that although the original imposition of GPS monitoring as a condition of the defendant's probation was a search, it was reasonable in light of the defendant's extensive criminal history and willingness to recidivate while on probation. We also conclude that once the GPS device was attached to the defendant, he did not possess a reasonable expectation of privacy in data targeted by police to determine his whereabouts at the times and locations of suspected criminal activity that occurred during the probationary period. Accordingly, no subsequent search in the constitutional sense under either art. 14 or the Fourth Amendment occurred. Finally, we conclude that the evidence introduced at trial was sufficient to support the trial judge's finding, beyond a reasonable doubt, that the defendant committed the crimes of breaking and entering in the nighttime and both charges of larceny over \$250. We therefore affirm the motion judge's denial of the motion to suppress and the defendant's convictions.¹

¹ We acknowledge the amicus briefs submitted by the Committee for Public Counsel Services and the American Civil Liberties Union of Massachusetts and by the Massachusetts Probation Service.

Background. 1. Motion to suppress. We summarize the facts as found by the judge who decided the motion to suppress, supplementing those findings with undisputed facts from the documentary evidence that was before the motion judge. See Commonwealth v. Monroe, 472 Mass. 461, 464 (2015).

In April 2012, the defendant appeared in the District Court for a probation violation hearing on four criminal dockets stemming from his prior convictions of receipt of stolen property and restraining order violations. The probation surrender was based on new charges that included breaking and entering and larceny from a building. After stipulating to the probation violation, the defendant asked for an extension of his probation subject to the added condition that he wear a GPS device on his ankle. The hearing judge accepted the request and ordered an extension of the defendant's probation for an additional six months with the added condition of GPS monitoring.

Between May and September 2012, while the defendant was on probation and subject to GPS monitoring, several break-ins occurred at homes in Hanson, Marshfield, and Pembroke. Approximately one year after these break-ins, in September 2013, the defendant was arrested near the scene of a separate break-in in Randolph. Randolph police became aware that the defendant had at one time been outfitted with a GPS device. Randolph

police then contacted a Marshfield police detective and suggested that she contact the probation department to review the defendant's historical GPS location data records during the approximate times of the unsolved break-ins. Marshfield police and probation officers thereafter accessed the defendant's historical GPS location data records and cross-referenced his location with the times and locations of the break-ins. They discovered that the defendant was at or near the scene of each break-in at approximately the same time that each home was broken into. The defendant was then indicted and charged with multiple counts of breaking and entering and larceny.

Before trial, the defendant moved to suppress the historical GPS location data, arguing that the Commonwealth's act of accessing and reviewing this data without a warrant was an unreasonable search in violation of the Fourth Amendment and art. 14. The motion judge concluded that the Commonwealth's conduct did not amount to a search in the constitutional sense under either the Fourth Amendment or art. 14 and denied the defendant's motion. The case then moved to trial.

2. The defendant's trial. One of the break-ins for which the defendant was charged and convicted occurred at a home in Marshfield on or about September 1, 2012. The defendant was convicted of breaking and entering the home in the nighttime and of larceny over \$250. The defendant now appeals, arguing that

there was not sufficient evidence to support the two convictions related to this break-in. We recite the facts the trial judge could have found with respect to these charges in the light most favorable to the Commonwealth, reserving other details for discussion when relevant to the issues raised. Commonwealth v. Latimore, 378 Mass. 671, 676-677 (1979).

From August 31, 2012, to September 3, 2012, the homeowners left their home to visit friends in New Hampshire. On September 3, 2012, the homeowners returned home; discovering broken glass spread over the floor of their garage, they called local police. They soon discovered that several pieces of jewelry, approximately \$400 in cash, and other sentimental items were missing from their home.

During the August 31 to September 3 time frame, the defendant's ankle was affixed with a GPS device as a condition of probation.² Evidence elicited at trial showed that while wearing a GPS device, a probationer's location is recorded and

² The defendant was regularly supervised by his probation officer throughout his probationary period. The probation officer testified that there were no indications that the global positioning system (GPS) monitoring device had been tampered with or was otherwise malfunctioning during the probationary period. He further testified that in his experience, he had never encountered an issue where a probationer's GPS device erroneously recorded his or her location such that the probation service's electronic monitoring program system showed that the probationer was in a location that he or she had not actually been.

stored by the device once every minute. This recorded location data is then transmitted to the probation service's electronic monitoring program (ELMO) system once every hour. Once the location data is uploaded to the ELMO system, it can be accessed by probation officers and displayed on electronically generated maps to pinpoint the probationer's location on a minute-by-minute basis. If the probationer is stationary or moving slowly when his or her location is recorded by the GPS device, a green dot will appear on the map. Because the probationer's location is recorded every minute, if a probationer remains stationary for more than a few minutes, a cluster of green dots will appear on the map. If the probationer is in motion when his or her location is recorded by the device, however, a green arrow will appear on the map to indicate the speed and direction of the probationer's movement.

The defendant's GPS device transmitted location data to the ELMO system, establishing that he was in the vicinity of the home in question on the night of September 1, 2012, and early morning of September 2, 2012. Specifically, a map generated by the ELMO system showed several green arrows on the street in front of the home, confirming that the defendant was traveling on that street at approximately 9:23 and 9:51 P.M. on September 1. The map also placed the defendant, represented by a single green dot, directly in front of, if not on, the property on

September 1. An additional map generated by the ELMO system revealed that the defendant was near the home just after midnight on September 2, 2012, and showed a cluster of green dots directly on and around the home that same day.

At the close of trial, the judge found the defendant guilty of the charges of breaking and entering that home in the nighttime and of larceny over \$250. The defendant moved for required findings of not guilty on these charges, but was denied. The defendant appealed from this denial, and we granted his application for direct appellate review.

Discussion. 1. Motion to suppress. On appeal, the defendant challenges the Commonwealth's act of accessing the historical GPS location data recorded from his GPS device, arguing that the retrieval and review of this data without a warrant was an unreasonable search under the Fourth Amendment and art. 14. Ordinarily, in reviewing a ruling on a motion to suppress, we accept the motion judge's "subsidiary findings of fact absent clear error," but we "review independently the application of constitutional principles to the facts found" (citation omitted). Commonwealth v. Mauricio, 477 Mass. 588, 591 (2017). However, we review any factual "findings of the motion judge that were based entirely on the documentary evidence" de novo. Monroe, 472 Mass. at 464, quoting Commonwealth v. Thomas, 469 Mass. 531, 539 (2014). Because the

motion judge here conducted a nonevidentiary hearing at which the evidence was stipulated, "we are in the same position as the motion judge" to assess the documentary evidence put forward by the parties.³ Monroe, supra, quoting Thomas, supra at 535 n.4. See Commonwealth v. Tremblay, 480 Mass. 645, 654-655 (2018) ("We now affirm the principle that an appellate court may independently review documentary evidence, and that lower court findings drawn from such evidence are not entitled to deference").

The Fourth Amendment and art. 14 protect individuals from "unreasonable searches" and "seizures." For the protections of either the Fourth Amendment or art. 14 to apply, however, the Commonwealth's conduct must constitute a search in the constitutional sense. Commonwealth v. Magri, 462 Mass. 360, 366 (2012). In its most traditional form, a search occurs when "the Government obtains information by physically intruding on a constitutionally protected area" (citation omitted). Grady v. North Carolina, 135 S. Ct. 1368, 1370 (2015) (per curiam). A search in the constitutional sense may also occur, however, "when the government's conduct intrudes on a person's reasonable

³ The documentary evidence before the motion judge here included the factual record that was stipulated to at the nonevidentiary hearing, the documents attached to the motion to suppress, and the Commonwealth's memorandum in opposition thereto, which included an affidavit from the defendant and various court and probation records.

expectation of privacy." Commonwealth v. Augustine, 467 Mass. 230, 241 (2014), S.C., 470 Mass. 837 and 472 Mass. 448 (2015). See Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring). An individual has a reasonable expectation of privacy (i) if the individual has "manifested a subjective expectation of privacy in the object of the search," and (ii) if "society is willing to recognize that expectation as reasonable" (citation omitted). Augustine, supra at 242. The defendant bears the burden of establishing that the governmental conduct violated his or her reasonable expectations of privacy. Commonwealth v. Miller, 475 Mass. 212, 219 (2016).

In the instant case, we must analyze the constitutionality of both the initial imposition of GPS monitoring for the purposes of probation and the police's subsequent review of the historical GPS location data for investigatory purposes after the defendant's probationary period had expired. For the reasons set forth infra, we conclude that although the initial imposition of the GPS monitoring for probationary purposes was a search in the constitutional sense under the Fourth Amendment and art. 14, it was a reasonable one. We also conclude that the police's subsequent act of accessing and reviewing the historical GPS location data after the defendant's probationary period had expired to determine whether he was present at the general time and place of particularly identified crimes did not

constitute a search under either the Fourth Amendment or art. 14, because the defendant had no reasonable expectation of privacy in this data.

a. The power and potential of GPS technology. As explained supra, a search in the constitutional sense may occur "when the government's conduct intrudes on a person's reasonable expectation of privacy." Augustine, 467 Mass. at 241. This court and the United States Supreme Court have recognized the difficulty of defining expectations of privacy that are implicated by novel applications of new technologies. Both courts have emphasized, however, that privacy rights cannot be left at the "mercy of advancing technology" but rather must be preserved and protected as new technologies are adopted and applied by law enforcement. See, e.g., Kyllo v. United States, 533 U.S. 27, 35 (2001) (prohibiting law enforcement's warrantless use of thermal imaging device to look into home so as not to leave privacy rights "at the mercy of advancing technology"); Olmstead v. United States, 277 U.S. 438, 473 (1928) (Brandeis, J., dissenting) (noting that courts must be vigilant to guard against "[s]ubtler and more far-reaching means of invading privacy [that] have become available to the government"); Augustine, supra at 250-251 (restricting law enforcement's use of cell site location information [CSLI] to track individuals due to intrusion of privacy interests). We

are now tasked with addressing these concerns in the context of law enforcement's use of a probationer's GPS location data for investigatory purposes.

As this court and the Supreme Court have held in recent years, there is no question that the government's extensive collection and examination of personal location data can intrude on an individual's reasonable expectation of privacy, at least for an individual who is not a probationer. The Supreme Court has emphasized in the Fourth Amendment context that individuals have a reasonable expectation of privacy in a detailed comprehensive documentation of their physical movements over an extended period of time due to the amount of sensitive and private information that can be gleaned from this data. Carpenter v. United States, 138 S. Ct. 2206, 2217, 2218 (2018) ("individuals have an expectation of privacy in the whole of their physical movements"). The same is true under art. 14. See Augustine, 467 Mass. at 253; Commonwealth v. Rousseau, 465 Mass. 372, 382 (2013). Much less clear, however, is how such decisions apply to probationers who have GPS devices attached to them as a condition of probation.

As is the case when an individual carries a cellular telephone or has a GPS device attached to his or her vehicle, a probationer's precise location is continuously tracked while he or she is wearing a GPS device as a condition of probation. See

Augustine, 467 Mass. at 253; Rousseau, 465 Mass. at 382.

Because law enforcement cannot similarly and continually track a probationer's location and monitor them in real time, or at least do so without extraordinary expense, the historical GPS location data gives probation officers and police "access to a category of information otherwise unknowable." Carpenter, 138 S. Ct. at 2217-2218. See United States v. Jones, 565 U.S. 400, 415-416 (2012) (Sotomayor, J., concurring). See also Carpenter, supra at 2218 ("With just the click of a button, the Government can access . . . [a] deep repository of historical location information at practically no expense"). The nature and extent of this GPS location data yields a "treasure trove of very detailed and extensive information about the individual's 'comings and goings'" for law enforcement. Augustine, supra at 251. See Jones, supra at 415 (Sotomayor, J., concurring) ("GPS monitoring generates a precise, comprehensive record of a person's public movements . . ."). This is particularly true where the tracking takes place over a long period of time. Augustine, supra at 253 ("when . . . tracking takes place over extended periods of time . . . the cumulative nature of the information collected implicates a privacy interest on the part of the individual who is the target of the tracking").

In cases of an extended probationary period, the Commonwealth is able to collect and archive an enormous volume

of location data.⁴ With this location data at its disposal, the Commonwealth could conceivably reconstruct a complete mapping of a probationer's movements throughout the probationary period if it chose to do so. See Carpenter, 138 S. Ct. at 2217. In so doing, the Commonwealth would be able to discover an extensive amount of sensitive and private information about a probationer's life. See id.; Augustine, 467 Mass. at 248-249. As the Supreme Court recently explained in Carpenter, supra at 2217, in the context of CSLI, location records "hold for many Americans the privacies of life" and "provide[] an intimate window into a person's life, revealing not only his [or her] particular movements, but through them his [or her] familial, political, professional, religious, and sexual associations" (quotations and citations omitted).

With this understanding of the power and the potential of this technology, we turn to the particular legal issues presented by the attachment of a GPS device to a probationer with a lengthy criminal history as a condition of probation, and to the subsequent act of accessing and reviewing this location data by the police after the expiration of his or her probationary period.

⁴ In the defendant's case, the probationary period was six months.

b. Imposition of GPS monitoring as a condition of probation. In 2015, in Grady, the United States Supreme Court held that a search under the Fourth Amendment occurs when the government "attaches a device to a person's body, without consent, for the purpose of tracking that individual's movements." Grady, 135 S. Ct. at 1370. There, the Court considered the constitutionality of a North Carolina statute that required recidivist sex offenders to be subjected to GPS monitoring. Id. at 1369. After determining that the GPS monitoring was "plainly designed to obtain information," and did so by "physically intruding on a subject's body," the Court concluded that it was a search under the Fourth Amendment. Id. at 1371. Imposing GPS monitoring as a condition of probation is also a search in the constitutional sense under art. 14. Commonwealth v. Feliz, 481 Mass. , (2019). Accordingly, the Commonwealth conducted a search of the defendant when the GPS monitoring condition was imposed on the defendant in this case.⁵ See Grady, supra at 1371; Feliz, supra.

⁵ Neither the defendant nor the Commonwealth addresses whether the initial imposition of the GPS monitoring as a condition of probation was a search in the constitutional sense on appeal. As this initial search is interconnected with the subsequent accessing of the data by the police, as both a practical and a legal matter, we must analyze both. The record on appeal is sufficient to allow us to exercise our discretion to address this issue. Mass. R. A. P. 16 (a) (9) (A), as appearing in 481 Mass. 1628 (2019). See Canter v. Commissioner of Pub. Welfare, 423 Mass. 425, 432 (1996).

As the Grady Court also explained, such a search is constitutional only if it was reasonable. Grady, 135 S. Ct. at 1371. See Feliz, 481 Mass. at ; Commonwealth v. Entwistle, 463 Mass. 205, 213 (2012), cert. denied, 568 U.S. 1129 (2013) ("the ultimate touchstone of . . . art. 14 is reasonableness" [quotation and citation omitted]). Article 14 requires an "individualized determination" of the reasonableness of subjecting a defendant to GPS monitoring as a condition of probation. Feliz, supra at . In making this determination, courts must balance "the Commonwealth's need to impose GPS monitoring against the privacy invasion occasioned by such monitoring." Feliz, supra at . See Grady, supra. Courts may consider a "constellation of factors," including, among others, the intrusiveness of the search; the defendant's particular circumstances, such as his or her criminal convictions, past probation violations, or risk of recidivism; and the probationary purposes, if any, for which the monitoring was imposed. Feliz, supra at (analyzing goals of probation and defendant's likelihood to recidivate in balancing test). See Grady, supra (noting that reasonableness depends on "the totality of the circumstances"). No single factor, however, is dispositive in every case. Feliz, supra at .

Prior to the imposition of GPS monitoring as a condition of his probation, the defendant in this case was on probation for

several convictions, including receiving stolen property and restraining order violations. The defendant thereafter violated his probation when he was charged with breaking and entering in the nighttime and larceny from a building. At the probation violation hearing, the defendant stipulated to the violations and requested that he be subject to GPS monitoring in an effort to avoid incarceration. The judge extended his probation for six months and ordered the GPS monitoring. At the hearing, the judge was clearly concerned about the defendant's likelihood to recidivate in the future. Specifically, the judge ordered the defendant to be held pending the installation of the GPS device to his ankle because the judge was "not comfortable" releasing the defendant to the public until it was determined when he could be "hooked up" with the GPS device and tracked.

In light of the defendant's criminal convictions, and past probation violations, the record makes clear that GPS monitoring was imposed on the defendant for the legitimate probationary purposes that this court and the Supreme Court have previously identified. See United States v. Knights, 534 U.S. 112, 120-121 (2001); Feliz, 481 Mass. at ; Commonwealth v. Lapointe, 435 Mass. 455, 459 (2001). These include deterring the probationer from engaging in criminal activity and detecting such criminal activity if it occurs. See Knights, supra; Lapointe, supra; Commonwealth v. Power, 420 Mass. 410, 415 (1995), cert. denied,

516 U.S. 1042 (1996). Although we have recognized that the imposition of GPS monitoring as a condition of probation significantly burdens a probationer's liberty, Feliz, supra at , we conclude that the intrusiveness of the GPS monitoring condition imposed on the defendant-probationer's already diminished privacy expectations⁶ was outweighed by the governmental interests served by such monitoring, including but not limited to the deterrence and detection of criminal activity during the probationary period. Accordingly, the defendant's particular circumstances rendered the imposition of GPS monitoring as a condition of his probation for six months reasonable under the Fourth Amendment and art. 14. Cf. Belleau v. Wall, 811 F.3d 929, 936-937 (7th Cir. 2016) (mandatory imposition of GPS monitoring for probationer pursuant to statute reasonable where defendant was recidivist sex offender). Contrast Feliz, supra at (GPS monitoring condition unreasonable in defendant's particular circumstances where, among other factors, Commonwealth presented insufficient evidence that defendant posed threat of "reoffending, or otherwise of violating the terms of his probation").

⁶ Both this court and the United States Supreme Court have previously recognized that a probationer has a diminished expectation of privacy. See United States v. Knights, 534 U.S. 112, 119 (2001); Commonwealth v. Moore, 473 Mass. 481, 485 (2016). See also part 2.c.ii, infra (discussing diminished expectations of privacy held by probationers).

c. Law enforcement's subsequent access to historical GPS location data. Having found the condition of probation subjecting the defendant to GPS monitoring for six months to be a reasonable search, we next address the constitutionality of the Commonwealth's subsequent act of accessing the historical GPS location data recorded from the defendant's GPS device. The Commonwealth's retrieval and review of this historical data requires a separate constitutional inquiry under the Fourth Amendment and art. 14 because it was conducted by the police, not the probation service, for investigatory, rather than probationary, reasons. It was also conducted after the defendant's probationary period had ended.

This type of governmental conduct is distinct from the periodic review of a probationer's GPS location by probation officials. The decision to review the GPS location data was not, for example, the result of the defendant entering an exclusionary zone, which would trigger an alert to a probation official. Nor was this a review of the defendant's location by a probation official to ensure compliance with any of the defendant's other conditions of probation. Rather, the review here was undertaken on the basis of law enforcement's hunch that the defendant may have been responsible for various unsolved housebreaks that took place in the preceding months. Accordingly, it requires a separate constitutional analysis.

i. Subjective expectation of privacy. To claim a reasonable expectation of privacy, the defendant must first "manifest[] a subjective expectation of privacy in the object of the search" (citation omitted). Augustine, 467 Mass. at 242. The defendant here requested and agreed to the GPS monitoring as a condition of his probation. He also averred in his affidavit in support of his motion to suppress that he was told that "the purpose of the GPS bracelet was to ensure that [he] did not enter any exclusionary zones."⁷ At minimum, the defendant knew that he was subject to GPS monitoring and that his location could be broadcast to probation officials under certain circumstances.⁸

⁷ As previously explained, the defendant was subjected to GPS monitoring following a probation violation hearing on four criminal dockets, including two restraining order violations. It is not clear from the record, however, that the defendant's probationary conditions, at least in this case, included any exclusionary zones. Indeed, the probation violation hearing and the order of probation conditions make no mention of any exclusionary zones, other than a handwritten notation on the order stating "No abuse of J." The section of the order dealing with "stay away" provisions was left blank. It does appear, however, that the defendant was at one point subjected to an exclusionary zone for a separate probationary term. See Commonwealth v. Johnson, 91 Mass. App. Ct. 296, 298 (2017).

⁸ We note, however, that the defendant's probation records fail to detail the extent of the GPS monitoring or explain the purposes for which the GPS location data would be recorded, retained, and used by law enforcement, including after his probationary period. Rather, these probation records merely note that the defendant would be subjected to GPS monitoring generally. For instance, the order of probation conditions, which was signed by the defendant, simply includes the

What the defendant subjectively understood his expectation of privacy to be while wearing the GPS device in this case is not perfectly clear. Whether he could plausibly argue that he did not understand that the purpose of the GPS device was to deter and detect his uninvited presence in other people's homes is not worth belaboring, however, as we conclude that he could have no objectively reasonable expectation of privacy in the historical GPS location data that was accessed and used by the Commonwealth here.

ii. Objective expectation of privacy. Even assuming that the defendant had a subjective expectation of privacy, the expectation must be one that society is willing to recognize as reasonable for the protections of the Fourth Amendment and art. 14 to apply. Augustine, 467 Mass. at 242. The defendant's status as a probationer is "salient" to this evaluation. Commonwealth v. Moore, 473 Mass. 481, 485 (2016). See Knights, 534 U.S. at 119. By virtue of being on probation, a probationer is subject to regular government supervision and thus can neither enjoy the same amount of liberty nor reasonably expect the same amount of privacy as an ordinary citizen. See Knights, supra. Accordingly, this court and the Supreme Court have recognized that, although probationers do not give up all

sentencing judge's handwritten notation, "GPS 6 Mo[nths]," as a special condition of probation.

expectations of privacy while on probation, their expectations are significantly diminished. See id.; Moore, supra.

The defendant here was of course not just on probation; he was on probation with the added condition of GPS monitoring because he had stipulated to violating his original sentence of probation after he was charged with breaking and entering and larceny while on probation. The defendant was thus on notice that GPS monitoring was imposed as a result of the defendant's criminal activity while on probation and the judge's concern over the defendant's demonstrated risk of recidivism. Any such defendant-probationer would therefore objectively understand that his or her person and movements were being recorded by the GPS device and monitored by the Commonwealth to ensure compliance with probationary conditions and to deter him or her from committing future crimes while wearing the GPS device. This understanding further diminished any objective expectation of privacy he might have had in his whereabouts, at least during the probationary period. Knights, 534 U.S. at 119-120 (privacy expectations diminished where probationer aware of condition of probation subjecting him to government monitoring). As the dissent appropriately recognizes, the defendant's subsequent decision to break and enter peoples' homes while wearing the GPS device in these circumstances took tremendous "chutzpah." Post at .

The Legislature has also provided for police access to probation information in G. L. c. 276, § 90, which states, in pertinent part, that a probation officer's records may "at all times be inspected by police officials of the towns of the commonwealth." G. L. c. 276, § 90. The statute thus provides an express, and apparently unlimited, authorization for law enforcement to review probation records, including the historical GPS location data recorded from a probationer's GPS device. See id. See also G. L. c. 276, § 100. The motion judge principally relied on this statute in reaching his conclusion that the defendant did not have an objectively reasonable expectation of privacy in the GPS location data recorded from the GPS device. The Commonwealth similarly argues that because the Legislature has authorized the police to inspect a probationer's records, the probationer has no objective expectation of privacy in any information contained therein. Although the statute informs our analysis of the objective expectation of privacy probationers may have in the GPS location data recorded from their GPS devices, it does not end our inquiry. We must, as always, provide an independent review of the constitutionality of the governmental conduct that is authorized by statute. Commonwealth v. Blood, 400 Mass. 61, 75 (1987) ("the historic fact of the Legislature's choice does

not relieve us of our constitutional obligation to review the validity of a search . . . in light of art. 14").⁹

The defendant contends that the Commonwealth's retrieval and review of the historical GPS location data intruded on his objective expectation of privacy because the Commonwealth accessed a broad and extensive accumulation of location data that spanned a period of several months. Analogizing his circumstances to those present in recent cases involving governmental use of location records outside the probation context, such as CSLI, the defendant argues that in accessing the GPS location data recorded from his GPS device, the Commonwealth was exposed to an enormous amount of sensitive information that could provide an "intimate window" into his

⁹ General Laws c. 276, § 90, was enacted in 1880 and was last amended in 1938. G. L. c. 276, § 90, as amended through St. 1938, c. 174, § 3. See St. 1880, c. 129, §§ 1, 5. The state of technology at the time meant that the enacting Legislature had no opportunity to evaluate the privacy interests that may now be implicated by the recording and storing of long-term historical GPS location data. See Commonwealth v. Augustine, 467 Mass. 230, 245 (2014), S.C., 472 Mass. 448 (2015) ("the digital age has altered dramatically the societal landscape"). See also United States v. Jones, 565 U.S. 400, 415 (2012) (Sotomayor, J., concurring) ("the same technological advances that have made possible [law enforcement's] nontrespassory surveillance techniques will . . . shap[e] the evolution of societal privacy expectations"). As stated supra, we must reconsider older statutes in light of new technologies to ensure that privacy rights are not left at "the mercy of advancing technology." Kyllo v. United States, 533 U.S. 27, 35 (2001). See Olmstead v. United States, 277 U.S. 438, 473 (1928) (Brandeis, J., dissenting); Augustine, supra at 250-251.

life. See Carpenter, 138 S. Ct. at 2217-2218. We recognize and respect the significant privacy concerns raised by the continuous recording, collection, and accumulation of location data described by the defendant. See id.; Augustine, 467 Mass. at 251-253. That being said, our task is to determine whether an individual's expectation of privacy is one that society is willing to recognize as reasonable. Augustine, supra at 242. There is no question that the reasonableness of any expectations of privacy held by a probationer knowingly subject to GPS monitoring as a condition of probation is far different from the reasonableness of the expectations of privacy held by individuals who are surreptitiously tracked by law enforcement.¹⁰

As explained supra, the defendant was subjected to GPS monitoring after he stipulated to having been charged with engaging in criminal activity while serving his original probation sentence. Under these circumstances, a probationer subject to GPS monitoring as a condition of probation would certainly objectively understand that his or her location would be recorded and monitored to determine compliance with the conditions of probation, including whether he or she had engaged in additional criminal activity, to deter the commission of such offenses, and that police would have access to this location

¹⁰ The dissent minimizes this important distinction. Post at .

information for that purpose.¹¹ General Laws c. 276, § 90, which serves the legitimate, even compelling, governmental purpose of detecting and determining whether a probationer engaged in criminal activity during the probationary period, confirms that objective understanding by expressly providing for police access to this data. This governmental interest in detecting and determining whether a probationer had engaged in criminal activity during his probationary period does not disappear once the probationary period ends. Indeed, criminal activity that occurred during the probationary period is of particular concern to the Commonwealth, as it reflects the recidivist nature of the probationer. This is true regardless of whether the criminal activity is detected during or after the probationary period. Accordingly, as opposed to nonprobationers who have their GPS, CSLI, or other precise location information recorded and reviewed by law enforcement without their knowledge, the defendant could not reasonably expect that his whereabouts while subject to GPS monitoring, particularly his whereabouts at the time and place of criminal activity, would remain private from

¹¹ As explained supra, the dissent appears to acknowledge this point to some extent, characterizing the defendant's willingness to break into homes while wearing a GPS monitoring device as a condition of probation as a "jaw-dropping act of audacity." Post at .

government eyes.¹² The defendant therefore could have no reasonable expectation of privacy in the data accessed by the police here to target criminal activity during the probationary period, even where the data was accessed after the probationary period ended.¹³

Moreover, the Commonwealth's conduct did not amount to the same type of conduct we have identified in other contexts as intruding on an individual's reasonable expectation of privacy

¹² We do not, as the dissent argues, suggest that a defendant "forfeits his [or her] expectation of privacy" upon notice of government surveillance. Post at note 4. Although notice is a relevant consideration, see Matter of a Grand Jury Subpoena, 454 Mass. 685, 689 (2009), we are in no way saying that it is dispositive. Whether notice of surveillance is given or not, the controlling question remains whether the expectation of privacy is one that society would call reasonable. See Hudson v. Palmer, 468 U.S. 517, 525 n.7 (1984). Here, as explained supra, we conclude that it is not.

¹³ The dissent argues that whatever diminished expectation of privacy the defendant had in the GPS data during probation "would have changed the day he completed his sentence." Post at . On that day, according to the dissent, he was not only no longer on probation, but he recovered an undiminished right to privacy in this data retroactively, as if he had never been on probation. This is incorrect. As explained supra, the principal purposes of the original imposition of GPS monitoring as a condition of probation are to rehabilitate the defendant, deter and detect criminal activity, and protect the public. Society would not consider it reasonable for a probationer to expect that evidence that he or she committed crimes during the probationary period could not be shared with law enforcement, even after the probationary period had ended, to determine whether he or she did in fact commit the crimes. Cf. Matter of a Grand Jury Subpoena, 454 Mass. at 689 n.6 (prison officials permitted to share recordings of inmate telephone calls with law enforcement).

in his or her whereabouts. See Augustine, 467 Mass. at 253 (CSLI); Rousseau, 465 Mass. at 382 (GPS tracking of motor vehicle). The record does not describe law enforcement engaged in an effort to map out and analyze all of the defendant's movements over the six-month probationary period. Nor does the Commonwealth appear to have, as the defendant argues on appeal, "rummaged through five months' worth of . . . locational data to find and trace every move [the defendant] made" during his probationary period. Rather, as the defendant recognized in his motion to suppress, the Commonwealth reviewed the defendant's historical GPS location data to determine whether he was present at the general times and locations when various unsolved break-ins may have occurred.¹⁴ This is corroborated by the motion to

¹⁴ The dissent disputes this. Post at . Citing "the uncontroverted statements in the defendant's memorandum in support of his motion to suppress," the dissent argues that the defendant's minute-by-minute movements over a period of months were reviewed by law enforcement. Id. at . This, the dissent argues, surely intruded on the defendant's reasonable expectation of privacy. Although the motion judge's findings of fact on this issue do not make this point clear, the dissent overstates the record in this case. Indeed, by the defendant's very own uncontroverted admission in his motion to suppress, the Commonwealth examined the defendant's location "at certain times [on] certain days" to determine if he was at the location of known criminal activity. Recognizing that the record does not support its position, the dissent looks to information outside of the record. Specifically, the dissent cites to an exhibit entered in evidence at trial and a summary of the trial testimony of a probation official of her conduct in a separate case as support for an inference that law enforcement intruded upon a reasonable expectation of privacy. This information,

suppress record, which appears to show that the GPS location data actually accessed and reviewed by the Commonwealth was targeted to the task at hand. The record before the motion judge, and provided to us on appeal, thus describes law enforcement accessing and analyzing the defendant's GPS location data with respect to the general times and locations of suspected criminal activity, particularly unsolved break-ins in

however, was not before the motion judge when he considered the defendant's motion to suppress.

It is well established that in reviewing a denial of a motion to suppress, an appellate court may not consider evidence outside the factual record that was put before the motion judge. See Commonwealth v. Rivera, 441 Mass. 358, 367 (2004) ("Evidence adduced at trial but not before the motion judge . . . cannot be determinative of the propriety of the motion judge's decision" [citation omitted]); Commonwealth v. Taylor, 383 Mass. 272, 280 n.9 (1981) ("we must judge the motion to suppress solely on the record made at the suppression hearing"); Commonwealth v. Wojcik, 358 Mass. 623, 631 (1971) ("Statements in a brief or oral argument cannot be used as a means of placing before this court any facts which are not included in the record on appeal"). Accordingly, we may not properly consider this information on appeal. Even had it been included in the record, much of the evidence cited by the dissent was not provided to us on appeal. See Chokel v. Genzyme Corp., 449 Mass. 272, 279 (2007) ("It is [the appellant's] obligation to include in the record appendix any documents on which he [or she] relies When a party fails to include a document in the record appendix, an appellate court is not required to look beyond that appendix to consider the missing document"). The defendant had the burden of proving that the Commonwealth's conduct violated a reasonable expectation of privacy. Commonwealth v. Miller, 475 Mass. 212, 219 (2016). The defendant here failed to meet this burden with the record as it existed before the motion judge. An appellate court cannot relitigate a motion to suppress on his behalf with materials outside the record.

Hanson, Marshfield, and Pembroke. Simply comparing subsets of the defendant's GPS location data recorded while he was on probation to the general times and places of suspected criminal activity during the probationary period is not a search in the constitutional sense. At least in other contexts, society has not recognized a probationer's purported expectation of privacy in information that identifies his or her presence at the scene of a crime as a reasonable one. Cf. Commonwealth v. Arzola, 470 Mass. 809, 816, 820 (2015), cert. denied, 136 S. Ct. 792 (2016) (deoxyribonucleic acid [DNA] analysis of bloodstain found on defendant's shirt did not amount to search because Commonwealth performed narrow analysis that avoided "reveal[ing] more information than the identity of the source"); Boroian v. Mueller, 616 F.3d 60, 67-68 (1st Cir. 2010) (retention and subsequent use of DNA profiles only to match against other profiles in criminal database after probationary period expired did not "violate an expectation of privacy that society is prepared to recognize as reasonable").

We also understand that even a targeted review of GPS data directed at times and locations of suspected criminal activity during a probationary period will likely expose the police to some other information concerning the defendant's whereabouts during the relevant time periods. Cf. Knights, 534 U.S. at 119-121 (discussing diminished expectations of privacy held by

probationers). This is, however, quite different from either mapping out and reviewing all of the defendant's movements while on probation or rummaging through the defendant's historical GPS location data indiscriminately. So long as the review is targeted at identifying the defendant's presence at the time and location of particular criminal activity during the probationary period, it is not a search, as such review is consistent with a probationer's limited expectations of privacy. See *id.* Police action necessary to deter and detect criminal activity during the probationary period is reasonably expected. See G. L. c. 276, § 90.

In sum, this case is not, as the defendant argues, one in which the police, after his probation had expired, mapped out months of the defendant's historical GPS location data in a coordinated effort to recreate a full mosaic of his personal life, over an extended and unnecessary period of time, that would have revealed, in the words of the United States Supreme Court, "not only his particular movements, but through them his [or her] familial, political, professional, religious, and sexual associations" (quotation and citation omitted). Carpenter, 138 S. Ct. at 2217. Nor it is a case of indiscriminate rummaging through six months of data. Those circumstances might raise different, more difficult constitutional questions about objective expectations of

privacy, even for a probationer subjected to GPS monitoring. We need not, and do not, decide that question today. According to the record before the motion judge, the police here instead targeted their analysis to whether the defendant -- a probationer with significantly diminished expectations of privacy in his whereabouts while on probation -- was present at the general times and locations of crimes committed during his probationary period. Such a review of the probationer's GPS location data, even if it may have revealed the presence of some lawful activities, did not intrude on any privacy expectations that society would be willing to recognize as reasonable. Accordingly, on the record put before the motion judge, the defendant has failed to make a showing that the Commonwealth intruded on any reasonable expectation of privacy he might have had in this data once the GPS was imposed as a condition of probation. The Commonwealth therefore did not commit a search in the constitutional sense under the Fourth Amendment or art. 14 when the police accessed this data after his probationary period expired.

2. Sufficiency of the evidence. The defendant also argues that the trial judge erred in denying his motion for required findings of not guilty on the counts of breaking and entering in the nighttime and larceny over \$250 that arose from the break-in in Marshfield on or about September 1, 2012. Specifically, the

defendant argues that the GPS location data introduced at trial only placed him in the vicinity of, but not inside, the home in question on September 1, 2012. Accordingly, he argues, the evidence put forth at trial was speculative and therefore not sufficient to prove beyond a reasonable doubt that he ever broke into and entered the home. We disagree.

In reviewing the denial of a motion for a required finding of not guilty, we must determine whether the evidence, when "viewed in the light most favorable to the Commonwealth and drawing all inferences in favor of the Commonwealth, would permit a rational [trier of fact] to find each essential element of the crime beyond a reasonable doubt." Commonwealth v. Merry, 453 Mass. 653, 660 (2009), citing Latimore, 378 Mass. at 676-677. "While the inferences drawn must be reasonable, they need not be necessary or inescapable" (quotation and citation omitted). Merry, supra at 661. The evidence would not be sufficient to convict the defendant of a charged crime, however, "if it requires piling inference upon inference, or requires conjecture and speculation" (quotations and citation omitted). Id.

General Laws c. 266, § 16, provides: "Whoever, in the night time, breaks and enters a building . . . with intent to commit a felony . . . shall be punished by imprisonment in the state prison for not more than twenty years or in a jail or

house of correction for not more than two and one-half years." The element of "break[ing]" is not defined by the statute, but has "long been understood to include all actions violating the common security of a dwelling," including "obvious intrusions into locked areas," "lifting a latch and opening the door," "shoving up a window," and moving "to a material degree something that barred the way" (quotations and citations omitted). Commonwealth v. Burke, 392 Mass. 688, 689-690 (1984). The element of "enter[ing]" is similarly not defined by the statute, but has traditionally been interpreted as constituting "any intrusion into a protected enclosure by any part of a defendant's body." Commonwealth v. Stokes, 440 Mass. 741, 748 (2004), quoting Burke, supra at 690.

Here, the evidence at trial showed that the homeowners were away from their home from August 31 to September 3, 2012. At no time did the homeowners grant the defendant permission to enter their home. When they returned home, they discovered that broken glass was spread on the floor of their garage. They later discovered that cash, jewelry, and sentimental items were missing from their home. The value of the missing items exceeded \$250.

At the time of the break-in, the defendant had been wearing a GPS device as a condition of probation. The device recorded the defendant's location every minute while he was wearing it

and uploaded this data to the ELMO system once every hour. There was no evidence that the defendant's GPS device was inaccurate or had been malfunctioning in any way during his six-month probationary period. The defendant's GPS device transferred location data to the ELMO system that placed the defendant in and around the home on the evening of September 1 and the very early morning of September 2.

At trial, the Commonwealth introduced this evidence through a collection of screenshots of maps that were electronically generated by the ELMO system.¹⁵ In these maps, the defendant's location was represented by either a green dot or a green arrow, depending on the defendant's speed of movement at the time his location was recorded by his GPS device. One of these maps clearly showed that as of approximately 9:23 and 9:51 P.M. on the night of September 1, the defendant was traveling on the street on which the home is located. Another map showed that the defendant was stationary on the street directly in front of, if not on, the property on September 1. A second set of maps subsequently confirmed that the defendant was steps away from the property at 12:03 A.M. on September 2. These maps also

¹⁵ The defendant did not object to the admissibility of these records or to the purpose for which they were being offered by the Commonwealth. The defendant did, however, object to their introduction to preserve his appeal from the denial of his motion to suppress them.

showed several green dots located around, and indeed directly on, the home at various times on September 2.

The defendant argues that this evidence was not sufficient under Latimore to convict him of breaking and entering because the GPS location data could not definitively prove that he ever entered the home. Rather, the defendant argues, these maps merely place him "in the general vicinity of [the home], but not on the property itself," and that accordingly, the Commonwealth's evidence only proved that he had the "opportunity to commit the charged crime[s]." The defendant overlooks the evidence of his location on the early morning of September 2 that was properly admitted at trial. This evidence placed the defendant directly on the property for several minutes. With all of this evidence in hand, any rational trier of fact could have reasonably inferred that the defendant broke and entered the home on or about September 1 and committed larceny over \$250. Accordingly, we conclude that there was sufficient evidence, when "viewed in the light most favorable to the Commonwealth" and taken together with the reasonable inferences drawn therefrom, to support the trial judge's conclusions that the defendant broke and entered the home on or about September 1 with the intent to commit a felony and stole items valued in excess of \$250. Merry, 453 Mass. at 660. We therefore affirm the defendant's convictions.

Conclusion. For these reasons, we affirm the denial of the defendant's motion to suppress and the defendant's convictions of breaking and entering in the nighttime under G. L. c. 266, § 16, and larceny over \$250 under G. L. c. 266, § 30.

So ordered.

LENK, J. (dissenting). As is hardly unusual with motions to suppress, the police hunch here proved to be quite right: the defendant was indeed involved in a series of unsolved breaking and entering cases. From April to September 2012, the defendant wore a global positioning system (GPS) device; it had been attached to his ankle at his request, in order that he remain on probation after he acknowledged that he had violated his terms of probation. While wearing the device, he nonetheless committed a series of break-ins in Hanson, Mansfield, and Pembroke. The break-ins went undetected at the time, and the defendant was released from probation. Approximately ten months later, in July 2013, the defendant again found himself subject to GPS monitoring, this time as a condition of pretrial release in connection with charges stemming from an incident of domestic violence in a different county. See Commonwealth v. Johnson, 91 Mass. App. Ct. 296, 297 (2017).¹ In yet another jaw-dropping act of audacity, while wearing the second GPS device, he committed a breaking and entering in the West Roxbury section of Boston in August 2013.

¹ In Commonwealth v. Johnson, 91 Mass. App. Ct. 296 (2017), this same defendant appealed from the denial of his motion to suppress a search of his 2013 global positioning system (GPS) data during the investigation of the 2013 break-in for which he had been arrested. The case now before the court concerns a different search, conducted around the same time, of the defendant's 2012 GPS records that were collected during a period of probationary supervision.

In September 2013, the defendant was arrested in Randolph near the scene of a separate break-in.

It is as a result of this arrest, approximately one year after the termination of the defendant's probation, that Marshfield police sought to determine whether he had been involved in ten unsolved break-ins that occurred between May and September 2012. To that end, the government began its warrantless search of the defendant's year old GPS data collected during his 2012 probationary period. It is this search, acknowledged by the court to have been based on no more than a police hunch, that the defendant urges be suppressed. See ante at . While his acts are chutzpah on stilts, I am constrained to agree with the defendant: our jurisprudence requires suppression. Consistent with our case law, the government needed a warrant before conducting its search of historical GPS records at a time when the defendant was not a probationer.

I do not disagree with the court that there is sufficient evidence to support the defendant's convictions. Nor do I disagree that the Commonwealth is entitled to accumulate location records of individuals whose GPS coordinates are monitored by the probation department, and that it may maintain a copy of those records even after termination of the individual's probationary supervision. As evidenced here, such

records later may prove useful. But the court's decision today has an impact on not only this defendant but, at a minimum, all individuals who have ever worn a GPS device while on probation.

Where my reasoning diverges from that of my colleagues is with respect to the level of judicial oversight required whenever the Commonwealth seeks to search the location history of an individual who once was -- but, at the time of the search, is not -- a probationer.² The court today determines that no judicial oversight of any kind is necessary. Because, in my view, art. 14 of the Massachusetts Declaration of Rights and the

² At the time police examined his GPS data, in the fall of 2013, the defendant had been arrested in connection with a break-in in West Roxbury. An individual's status as a pretrial detainee, however, does not permit a warrantless search of that individual's historical location information. See Commonwealth v. Broom, 474 Mass. 486, 491-492 (2016) (warrant supported by probable cause required to access defendant's historical cell site location information [CSLI] subsequent to arrest). Cf. Riley v. California, 573 U.S. 373, 401 (2014) (requiring search warrant to access contents of cellular telephone while defendant was held pretrial); Shipley v. California, 395 U.S. 818, 820 (1969) (requiring warrant to search defendant's house after defendant was arrested outside house). The narrow "search incident to arrest" exception, which permits some warrantless searches when detainees first enter custody, is inapplicable here. See Preston v. United States, 376 U.S. 364, 367 (1964) ("Once an accused is under arrest and in custody, then a search made at another place, without a warrant, is simply not incident to the arrest"). Constitutional protections are in full force during pretrial detention. Cf. Miranda v. Arizona, 384 U.S. 436, 444-445 (1966) (defendant retains right to remain silent under Fifth Amendment to United States Constitution throughout duration of custody).

Fourth Amendment to the United States Constitution require more, I respectfully dissent.

Two relevant time periods. The court is correct to separate this case into two moments of constitutional analysis: "the initial imposition of GPS monitoring for the purposes of probation," on the one hand, and the "subsequent review of the historical GPS location data for investigatory purposes after the defendant's probationary period had expired," on the other. Ante at . The court determines, and I agree, that the attachment of the GPS device in April 2012, at the defendant's own request, was a search, and that the search was lawful here. See Grady v. North Carolina, 135 S. Ct. 1368, 1371 (2015) (electronic monitoring by physical bodily intrusion is search); Commonwealth v. Feliz, 481 Mass. , (2019) (reviewing court must balance government interests in imposing GPS monitoring against defendant's reasonable expectation of privacy). That lawful intrusion continued until September 2012, when the GPS device was removed and probationary supervision was terminated. Approximately one year later, police sought to reexamine the defendant's old GPS records. It is at that point, after the completion of probation, that the court fails to consider the defendant's actual and reasonable expectation of privacy with respect to the history of his movements. See Commonwealth v. Augustine, 467 Mass. 230, 242 (2014), S.C., 470

Mass. 837 and 472 Mass. 448 (2015) (search occurs when government intrudes on actual and reasonable expectation of privacy).

It is not implausible that, as the defendant asserts, once he was released from probation and the GPS device was removed from his ankle, he came to believe that the police could not "access [his] GPS data without a warrant." The defendant states that he had been ordered to wear the GPS monitor "as a condition of [his] Probation" and was "told that the purpose of the GPS bracelet was to ensure that [he] did not enter any exclusionary zones." Upon the successful completion of probation and the removal of the monitoring device, such insurance no longer was necessary, and the defendant received no indication that his location history would continue to be examined.

The more significant question, and the one to which the court devotes the majority of its discussion, is whether an individual reasonably may expect his or her location history to become private after the probation department no longer requires it for the purposes of monitoring the individual's progress as a probationer. To answer that question, we must turn to our jurisprudence regarding the expectations of privacy that individuals maintain in their historical location information.³

³ Without citation to any authority, the court insists, by ipse dixit, that the "governmental interest in detecting and

Historical location information. "[U]nder art. 14, a person may reasonably expect not to be subjected to extended GPS electronic surveillance by the government, targeted at his movements, without judicial oversight and a showing of probable cause." Augustine, 467 Mass. at 248, quoting Commonwealth v. Rousseau, 465 Mass. 372, 382 (2013). This court has recognized that the history of an individual's movements, over a sufficiently lengthy period of time, reveals a great number of personal details. When the government learns where people have been, it learns

determining whether a probationer had engaged in criminal activity during his probationary period does not disappear once the probationary period ends." Ante at . It is not clear why this would be the case; after the termination of the probationary period, probation no longer can be revoked for a violation of probation. At that point, the only interest in conducting the search would be to detect ordinary criminal wrongdoing. Although "there are instances in which we have permitted searches without individualized suspicion, '[i]n none of these cases . . . did we indicate approval of a [search] whose primary purpose was to detect evidence of ordinary criminal wrongdoing.' . . . That limitation is crucial." See Maryland v. King, 569 U.S. 435, 468 (2013) (Scalia, J., dissenting), quoting Indianapolis v. Edmond, 531 U.S. 32, 38 (2000).

In any event, the determination whether a search has occurred in the constitutional sense does not turn on the government's interest, but, rather, on the individual's expectation of privacy. See Commonwealth v. Augustine, 467 Mass. 230, 241 (2014), S.C., 470 Mass. 837 and 472 Mass. 448 (2015). See also United States v. Karo, 468 U.S. 705, 715 (1984) (determining search was unconstitutional while recognizing that government "is extremely interested" in its outcome).

"not just where people go -- which doctors, religious services, and stores they visit -- but also the people and groups they choose to affiliate with and when they actually do so. That information cuts across a broad range of personal ties with family, friends, political groups, health care providers, and others. . . . [It] can provide an intimate picture of one's daily life." (Citation omitted).

See Augustine, supra. The United States Supreme Court similarly has observed that historical location information reveals "familial, political, professional, religious, and sexual associations" (citation omitted). Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018). "These location records hold for many Americans the privacies of life" (quotations and citation omitted). Id.

Accordingly, both this court and the Supreme Court, applying art. 14 and the Fourth Amendment, respectively, have required a search warrant supported by probable cause prior to examining the long-term movements of an individual, as approximated by the movements of his or her cellular telephone through cell site location information (CSLI). See Carpenter, 138 S. Ct. at 2221; Augustine, 467 Mass. at 256. As the Supreme Court has observed, "when the Government tracks the location of a cell phone it achieves near perfect surveillance, as if it had attached an ankle monitor to the phone's user." Carpenter, supra at 2218.

This case goes a step further, asking us to consider what reasonable expectation of privacy a former probationer has when the government literally has "attached an ankle monitor" to that individual's leg. In such a case of historical "perfect surveillance," the individual's privacy interest in the data collected ought not be less than that which we recognize in the case of cellular telephones.

Yet the court concludes that no reasonable expectation of privacy was implicated here. Had the police attempted to retrieve the defendant's location history by contacting his cellular telephone provider, our jurisprudence plainly would have required a warrant supported by probable cause. See Augustine, 467 Mass. at 254-255. The court, however, maintains that historical location information collected by a GPS ankle monitor is distinguishable from that collected by a cellular telephone for four reasons: (1) probationers have diminished expectations of privacy; (2) the government is permitted to reexamine records it has collected lawfully; (3) we have permitted similar warrantless searches in the context of matching deoxyribonucleic acid (DNA) profiles; and (4) relatively little information was examined in this case. In my view, none of these arguments is persuasive.

1. Probationers' and former probationers' expectations of privacy. The court notes that a probationer has a diminished

expectation of privacy relative to an "ordinary citizen." Ante at . A "diminished" expectation of privacy, however, is not "no" expectation of privacy. We previously have observed that probation is not imprisonment; indeed, it is not even on a par with parole. See Commonwealth v. Moore, 473 Mass. 481, 485-486 (2016) ("parole is more akin to imprisonment than probation is" [citation omitted]). Accordingly, "art. 14 bars the imposition on probationers of a blanket threat of warrantless searches." Commonwealth v. LaFrance, 402 Mass. 789, 795 (1988) (requiring reasonable suspicion to search probationer's home and person, even where probationer consented to suspicionless searches).

The court does not grapple with the implications of LaFrance. Instead, it determines that, because the defendant knew he had been monitored via the GPS device, he could not reasonably expect his location to remain private when probation ceased. See ante at . Even if knowledge of government surveillance were sufficient to defeat a reasonable expectation of privacy while the defendant actually was on probation,⁴ a

⁴ The court suggests that, because the monitoring here was not surreptitious, the defendant forfeits his expectation of privacy. See ante at . I am troubled by the court's reasoning that, because the Commonwealth might have informed the defendant that he ought have no expectation of privacy -- i.e., the surveillance was not surreptitious -- his art. 14 rights thereby evaporated. See ante at . "Notice of the government's claimed search authority" does not itself abrogate art. 14. See 5 W.R. LaFave, Search and Seizure § 10.10(c), at 544-545 (5th ed. 2012) (criticizing role of "notice" in Federal

point we need not address, the defendant's expectation of privacy would have changed the day he completed his sentence. See United States v. Kincade, 379 F.3d 813, 870 (9th Cir. 2004) (Reinhardt, J., dissenting), cert. denied, 544 U.S. 924 (2005) (defendant "has paid his debt to society," State has "cease[d] to have a supervisory interest over [him]," and he merits "full future expectation of privacy"); id. at 871-872 (Kozinski, J., dissenting) ("Once [defendant] completes his period of supervised release, he becomes an ordinary citizen just like everyone else. Having paid his debt to society, he recovers his full Fourth Amendment rights, and police have no greater authority to invade his private sphere than anyone else's").⁵

The defendant, it must be remembered, was not a probationer at the time the police searched his GPS data; his period of probation had terminated nearly a year earlier. Rather, the

probationer search cases). See also Samson v. California, 547 U.S. 843, 863 (2006) (Stevens, J., dissenting), quoting Smith v. Maryland, 442 U.S. 735, 740 n.5 (1979) ("the loss of a subjective expectation of privacy would play 'no meaningful role' in analyzing the legitimacy of expectations, for example, 'if the Government were suddenly to announce on nationwide television that all homes henceforth would be subject to warrantless entry'").

⁵ The court discounts the notion that a former probationer would recover his or her right to privacy "retroactively," "as if he [or she] had never been on probation." Ante at note 13. The court knocks down a straw man. Here, the government searched the defendant's records after probation terminated. His rights were not retroactive; they protected him at the time of the search. See note 7, infra.

defendant had returned to society as an "ordinary citizen." See ante at . See also note 2, supra. Nonprobationers, including former probationers, enjoy the full protections of art. 14 and the Fourth Amendment; for a nonprobationer, probable cause and a warrant are required to search historical location information.⁶ See generally Carpenter, 138 S. Ct. at 2217; Augustine, 467 Mass. at 254-255.

⁶The court's repeated references to the defendant as a probationer, following the termination of his period of probation, minimizes the difference between an actual probationer and a former probationer -- i.e., an ordinary citizen. See, e.g., ante at ("defendant-probationer"); id. at ("probationer's GPS location data"); id. at ("the defendant -- a probationer").

These references are a stark reminder of the court's underlying view that, for those who once wore GPS devices, probation never fully ends. No matter how long a period of time elapses after the formal termination of probation, no matter how exemplary the person's conduct may be thereafter, he or she always will be branded a probationer. It is of course easy enough to call "unreasonable" this miscreant defendant's postprobation expectation of privacy in data collected during a probationary period in which he repeatedly reoffended. But the court's view encompasses as well those who, years after their successful rehabilitation, will have voluminous and intimately personal data exposed to intrusive governmental examination without probable cause or a warrant. Surely at some point society would have to recognize as reasonable the former probationer's expectation of privacy, but when might that be? After five, nineteen, or twenty-five years? After all statutes of limitation have run? The court apparently settles on "never." Believing as I -- and much of society -- do, in the possibility both of rehabilitation and of discharging one's debt to society, I conclude that people once on probation regain the rights and privileges of ordinary citizenship once their probation ends.

2. Reexamination of formerly obtained information. The court, however, appears to suggest that, because the GPS data had been collected lawfully by the probation department in the first instance, the Commonwealth is permitted to dip back into that well at any time. In other words, once the government permissibly has obtained information about an individual, that individual is deprived permanently of all expectation of privacy in that information.⁷

No reasonable person would expect, however, that the government, having lawfully obtained a copy of a suspect's historical CSLI, could post those records on the Internet or plaster them on billboards. "It would appear reasonable to expect that a government agency, to which a citizen is required

⁷ In the context of warrant-based searches, this plainly is not the case. Rather, a new warrant is required whenever the government seeks to reexamine digital evidence for some new investigatory purpose that exceeds the bounds of the initial search warrant. See, e.g., United States v. Walser, 275 F.3d 981, 987 (10th Cir. 2001), cert. denied, 535 U.S. 1069 (2002) (no violation of Fourth Amendment where, upon inadvertently discovering child pornography on computer, investigator "immediately suspended his search and went to a magistrate for a new warrant"); United States vs. Koch, U.S. Dist. Ct., No. 3:08-cr-0105-JAJ (S.D. Iowa June 1, 2009), aff'd, 625 F.3d 470 (8th Cir. 2010) (investigator "did precisely what he should have done -- stopped his search soon after he found child pornography and sought a new search warrant"). Cf. 2 W.R. LaFave, J.H. Israel, N.J. King, & O.S. Kerr, Criminal Procedure § 3.4(j) (4th ed. 2015) ("A warrant may be executed only once, and thus if a place is to be searched a second time the proper procedure is to obtain a second warrant based on an affidavit explaining why there is now probable cause notwithstanding the execution of the earlier warrant" [footnote omitted]).

to submit certain materials, will use those materials solely for the purposes intended and not disclose them to others in ways that are unconnected with those intended purposes."

Commonwealth v. Buccella, 434 Mass. 473, 485 (2001), cert. denied, 534 U.S. 1079 (2002).⁸ The government's permitted use of information it obtains is limited, and the subject of the information retains reasonable expectations of privacy in it.

In the context of physical evidence, "[p]roperty seized pursuant to a search warrant must be restored to its owners when it is no longer needed." See Commonwealth v. Sacco, 401 Mass. 204, 207 n.3 (1987), citing G. L. c. 276, § 3. Once the item is returned, the expectation of privacy is restored; to search the object again, probable cause and a warrant again are required.⁹ That protection is not limited to physical objects; indeed, art. 14 and the Fourth Amendment are premised on privacy rights, not property rights. See Carpenter, 138 S. Ct. at 2213 ("the Court has recognized that property rights are not the sole

⁸ What is reasonable at one time, for one purpose, may not be reasonable at another time, for another purpose. Cf. Zittrain, *Searches and Seizures in a Networked World*, 119 Harv. L. Rev. F. 83, 89 (2005) (reasonableness of searching individual's electronic files "ought to hinge in part on retaining such data no longer than necessary for a specific purpose").

⁹ See, e.g., People v. Trujillo, 15 Cal. App. 5th 574, 584 (2017) ("If [defendant] is successful at his probation, the Fourth Amendment waiver will terminate and his electronic devices will again be completely private").

measure of Fourth Amendment violations . . . and expanded our conception of the Amendment to protect certain expectations of privacy as well" [quotations and citations omitted]). As Professor Orin Kerr cautions, it is necessary to impose the same constitutional protections on a search of the government's copy of digital data as would be imposed on the search of the individual's copy of the same.¹⁰ See Kerr, *Searches and Seizures in a Digital World*, 119 Harv. L. Rev. 531, 560 (2005).

Otherwise, it is not clear, from the court's reasoning, what prevents a police officer from adding every CSLI record he or she legally obtains, pursuant to a warrant, to a database of accumulated government intelligence regarding the movements and whereabouts of any individual. Nor is it clear when, if ever, judicial oversight would be exercised prior to permitting an officer -- operating even on an educated hunch -- from perusing that data at any point in the future.¹¹

¹⁰ "Permitting the government to make and retain copies of our private electronic [information] seems inconsistent with our traditions. The idea that the government could freely generate copies of our [data] and indefinitely retain [it] in government storage seems too Orwellian -- and downright creepy -- to be embraced as a Fourth Amendment rule." Kerr, *Searches and Seizures in a Digital World*, 119 Harv. L. Rev. 531, 560 (2005). See also *id.* at 556 ("Over time, it should become increasingly clear that the Fourth Amendment should track the information, not the physical box").

¹¹ "[T]he Government cites, and the Court is aware of, no authority suggesting that simply because it has retained all originally searchable electronic materials, the Government is

Such an accumulation of data, whether limited to GPS records of probationers or expanded to GPS records of ordinary citizens, "never would [have been] available through the use of traditional law enforcement tools of investigation" (emphasis in original). See Augustine, 467 Mass. at 248, 254. "At bottom, we must assur[e] preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted" (quotation and citation omitted).¹² United States v. Jones, 565

permitted to return to the proverbial well months or years after the relevant Warrant has expired to make another sweep for relevant evidence, armed with newly refined search criteria and novel case theories." United States v. Wey, 256 F. Supp. 3d 355, 406 (S.D.N.Y. 2017).

In United States v. Ganas, 824 F.3d 199, 201, 207, 225 (2d Cir.), cert. denied, 137 S. Ct. 569 (2016), for example, investigators obtained digital records from an accountant in order to investigate two of his clients. Three years later, the government sought to reexamine the records, this time targeting the accountant himself. To do so,

"the Government applied for a new search warrant and made clear in its application that it wished to run new searches over electronic materials that had been in its custody, and assumed irrelevant, for several years. . . . The [Second] Circuit, sitting en banc, upheld the later search . . . in large measure because the Government had acted reasonably in applying for the second warrant and alerting the magistrate to the circumstances." (Emphases in original.)

Wey, 256 F. Supp. 3d at 407.

¹² "I would also consider the appropriateness of entrusting to the Executive, in the absence of any oversight from a coordinate branch, a tool so amenable to misuse, especially in light of the Fourth Amendment's goal to curb arbitrary exercises of police power to and prevent a too permeating police

U.S. 400, 406 (2012). The construction of a database of individuals' location histories risks making "technologically feasible the Orwellian Big Brother." See United States v. White, 401 U.S. 745, 770 (1971) (Harlan, J., dissenting). Our traditions require this risk be balanced with the measured check of judicial oversight.

3. DNA databases. The court asserts that there is nothing to fear from this new technology, as it merely "identifies [the defendant's] presence at the scene of a crime," not unlike comparing DNA sample against a government database. Ante at . Relying on Boroian v. Mueller, 616 F.3d 60, 67-68 (1st Cir. 2010), the court maintains that matching a probationer's DNA profile after the termination of probation does not violate a reasonable expectation of privacy. See ante at .

DNA relates to an individual's identity; indeed, it "reveal[s] nothing more than the identity of the source." See Commonwealth v. Arzola, 470 Mass. 809, 816 (2015), cert. denied, 136 S. Ct. 792 (2016). It may well be that individuals do not have a reasonable expectation of privacy in concealing their identity, i.e., their face, fingerprint, DNA, or other immutable identifiers, from the police. But location data reveals more.

surveillance" (citations omitted). United States v. Jones, 565 U.S. 400, 415-17 (2012) (Sotomayor, J., concurring).

Indeed, the United States Court of Appeals for the First Circuit reasoned that warrantless DNA-matching was permissible precisely because a DNA profile "does not reveal any new, private or intimate information about [the defendant]." See Boroian, 616 F.3d at 67. The same cannot be said of long-term GPS data. As we have observed, long-term location information can paint an "intimate picture of one's daily life" (citation omitted). Augustine, 467 Mass. at 248. See Carpenter, 138 S. Ct. at 2217.

It is one thing to permit an officer of the Commonwealth to examine, without cause, the presence of alleles across various DNA samples stored in a DNA database. It is quite another to allow that officer to examine the minute-by-minute location history of individuals over a period of months, revealing, as that analysis may, any number of "familial, political, professional, religious, and sexual associations" (citation omitted). See Carpenter, 138 S. Ct. at 2217.¹³ Notably, and

¹³ The United States Court of Appeals for the First Circuit further reasoned that "the government's comparison of [the defendant's] DNA profile with other profiles in [the Combined DNA Index System database (CODIS)] is precisely the use for which the profile was initially lawfully created and entered into CODIS." Boroian v. Mueller, 616 F.3d 60, 67 (1st Cir. 2010). Yet, here, the government's comparison of the defendant's location history with the locations of known break-ins is not the use for which the defendant's location information initially was collected. "There is a need to supervise [a probationer] both to aid in the probationer's rehabilitation and to ensure her compliance with the conditions

contrary to the court's characterization, the Commonwealth's examination of location data in this case far exceeded merely identifying an individual's binary "presence."

4. Amount of information examined. The court takes pains to assure us that police "targeted their analysis" to "the time and location of particular criminal activity," such that their review was "not a search in the constitutional sense." Ante at . The court previously has determined, for example, that police may examine up to six hours of historical location information from a cellular telephone provider without judicial oversight, as the duration is too short to infringe upon reasonable expectations of privacy.¹⁴ See Commonwealth v.

of probation." See Commonwealth v. LaFrance, 402 Mass. 789, 792-793 (1988). Once probation was terminated, however, the location information was repurposed, a year later, as an investigative tool; this was not "precisely the use" for which it originally was intended. See Boroian, supra.

¹⁴ In establishing this six-hour safe harbor, we emphasized that, "in terms of reasonable expectation of privacy, the salient consideration is the length of time for which a person's CSLI is requested, not the time covered by the person's CSLI that the Commonwealth ultimately seeks to use as evidence at trial." Commonwealth v. Estabrook, 472 Mass. 852, 858-859 (2015). For example, "[i]t would violate the constitutional principles underlying our decision in Augustine to permit the Commonwealth to request and obtain without a warrant two weeks of CSLI -- or longer -- so long as the Commonwealth seeks to use evidence relating only to six hours of that CSLI". See id. at 859. The defendant is not required to show that police "mapped out months of [his] historical GPS location data in a coordinated effort to recreate a full mosaic of his personal life." See ante at . At the point at which the

Estabrook, 472 Mass. 852, 858 (2015). The court suggests similar reasoning here: the examination of the defendant's historical location information was narrow, and ergo, it was not a search. The record, however, paints a different picture.

As a probationer, the defendant was monitored by means of a GPS device once every minute for a period of six months, from April to September 2012. According to the uncontroverted statements in the defendant's memorandum in support of his motion to suppress, Barbara McDonough, of the probation department, gave a presentation to police one year later, on October 9, 2013, detailing the defendant's GPS history. Marshfield police Detective Kim Jones subsequently cross-referenced that information with the dates of the break-ins.

At the time, police were investigating ten break-ins occurring between May and September 2012. In the case of one break-in on September 1, 2012, the homeowners had been away for the four-day Labor Day weekend, beginning on August 31, 2012, only to discover the break-in upon their return on September 3. Reviewing the defendant's GPS records, police determined that the defendant was in or near the house on the evening of September 1 and the early morning of September 2. It is difficult to imagine how police would have reached that

Commonwealth obtains the data, it has violated the individual's reasonable expectation of privacy.

conclusion without examining the defendant's location for the entire four-day period (ninety-six hours). The defendant's location history was further examined with respect to the other nine break-ins.¹⁵

It is also clear that the search was not limited only to the dates and times during which the break-ins were believed to have actually occurred. At the nonevidentiary hearing on the motion to suppress,¹⁶ the Commonwealth acknowledged that the probation department was "able to map [the] defendant's actions that were consistent with not only breaking into the houses," but also, in other instances, "prior to breaking into the houses, casing the houses."

Combined, it hardly overstates the record to say that the Commonwealth's search encompassed hundreds of hours of location information, spanning multiple days before and during potential

¹⁵ At a minimum, these required additional examinations of the defendant's movements on May 8, 2012; May 16, 2012; June 4, 2012; July 14, 2012; and August 27, 2012. Moreover, it is not clear that police were aware of the particular times during which the break-ins occurred; if not, even further examination of the defendant's movements would have been required merely with respect to these specific incidents.

¹⁶ On March 19, 2015, the motion judge held an evidentiary hearing with respect to the defendant's first argument in support of his motion to suppress, that his arrest was an unlawful search and seizure. On February 10, 2016, the judge held a nonevidentiary hearing on the defendant's second argument, that the examination of his GPS records was unlawful as a warrantless search. The judge denied the motion to suppress on both grounds on March 16, 2016.

periods of suspicious activity, throughout a several-month period. To be sure, the information proved useful. But I am not persuaded that the investigation was "too brief to implicate [a] person's reasonable privacy interest" (citation omitted). Contrast Estabrook, 472 Mass. at 858 (no warrant required to examine six hours of location information). Indeed, the motion judge made no such finding.¹⁷ Accordingly, on the evidence before the motion judge, the defendant met his burden to show that the Commonwealth violated his reasonable expectations of privacy. See Commonwealth v. Miller, 475 Mass. 212, 219-220 (2016). Before the search was undertaken, probable cause and a warrant should have been secured.

¹⁷ The judge's relevant findings, based on stipulated facts, were as follows:

"[Randolph police] decided to contact the Commissioner of Probation and obtain records of [the defendant's] location at various times to determine if they matched up with unsolved housebreaks on the South Shore. To that end, [Randolph police] contacted Marshfield Police Detective Kim Jones . . . and suggested she contact the probation department and look into [the defendant's] whereabouts. Thereafter, the Marshfield police and two probation officers reviewed the record of [the defendant's] travels into Marshfield, Hanson and Pembroke. Once this information was developed, Jones cross-referenced it with recent break-ins in those three towns and discovered that [the defendant] was at the scene of the housebreaks at the time of the alleged breaks."

The judge made no finding with respect to the scope of the GPS data reviewed, nor does his reasoning rely on the narrowness thereof.

Having determined, instead, that the search was insufficiently extensive to merit constitutional protection, the court nonetheless acknowledges that a reasonable expectation of privacy may be implicated, "even for a probationer subjected to GPS monitoring," where police "map[] out months of the defendant's GPS location data . . . over an extended and unnecessary period of time." See ante at . The court insists, however, that such a case, which "might raise different, more difficult constitutional questions" is not before us and "[w]e need not, and do not, decide that question today." Id. at .

I would require a warrant supported by probable cause even where fewer than "months" of GPS data were examined, consistent with our jurisprudence in Augustine, 467 Mass. at 254-255, and Estabrook, 472 Mass. at 858. To the extent that the court is concerned that the review of "months" of historical GPS data raises "difficult constitutional questions," in my view, those questions are raised here. Evidence of such a months-long search was not before the motion judge, and therefore does not form the basis of my determination that the judge's denial of the motion to suppress was error. See Commonwealth v. Rivera, 441 Mass. 358, 367 (2004) ("Evidence adduced at trial but not before the motion judge . . . cannot be determinative of the propriety of the motion judge's decision" [citation omitted]).

Insofar as the court's reasoning is premised on a finding that this search was "targeted," however, I note that the motion judge made no such finding, see note 17, supra, and the information now known to us does not support one.

Indeed, information developed following the denial of the motion to suppress suggests that the search in this case was much broader than the court is willing to acknowledge. In Johnson, 91 Mass. App. Ct. 296, to which the court itself cites, this defendant appealed from other charges stemming from the Commonwealth's search of his probationary GPS records. The same Barbara McDonough of the probation department conducted the GPS records searches in both cases. She testified as to the manner in which she conducted the search as follows:

"McDonough testified that she searched the defendant's minute-by-minute movements for the entire period he was monitored by the GPS system, namely from July 8, 2013, forward. 'Each day was a 24-hour investigation on him to see where he was, until the time he came off the bracelet.' . . . She reviewed several months' worth of historical data to determine the defendant's location and movements at all times of day and night, and overlaid the data on a map. The data revealed not only the defendant's location, but also his speed and direction. The data tracked the defendant into buildings, including private residences."

Id. at 318 (Wolohojian, J., dissenting). McDonough reported her findings in that case to Boston police in November 2013, less than one month after her report to the Marshfield police in this case. Although we do not have the benefit of McDonough's testimony in this case, it seems reasonable to conclude that her

methods did not differ substantially between her two examinations of the same defendant's GPS records, conducted within the span of several weeks.

Evidence admitted at trial in this case corroborates McDonough's testimony regarding her meticulous methods. Exhibit 2A, the first of the Commonwealth's maps of the defendant's movements, is labeled as the defendant's "Position History" from "12:00:00 A.M." to "11:59:59 P.M." on September 1, 2012. The exhibit is only the first of several such maps. Taken together, it would appear that the Commonwealth examined the defendant's minute-by-minute movements for periods of twenty-four hours at a time over the course of several months, thus clearly exceeding the "targeted" analysis the court portrays, and raising the very questions the court leaves for another day. See ante at .

In the interest not of expediency, but of justice, i.e., reaching the right result, we ought not blind ourselves to the indications that this search was far more extensive than initially assumed. If the court intends to rely on findings regarding the scope of the search, it should remand for an evidentiary hearing to determine the true extent of the GPS data examined.

Conclusion. Article 14 and the Fourth Amendment exist to inject some degree of judicial oversight into the process by which the government may conduct surveillance. See Carpenter,

138 S. Ct. at 2214. To the extent that their protections are dimmed while an individual is on probation, they must return to full brightness upon completion of the probationary term.

"Interposition of a warrant requirement is designed not to shield 'wrongdoers,' but to secure a measure of privacy and a sense of personal security throughout our society." White, 401 U.S. at 790 (Harlan, J., dissenting).

Doubtless, the court's decision today will aid in the rapid resolution of future investigations, as it did in this case. So, too, would granting carte blanche for police to obtain any individual's historical location records without a demonstration of cause. Yet "[our ancestors], after consulting the lessons of history, designed our Constitution to place obstacles in the way of a too permeating police surveillance, which they seemed to think was a greater danger to a free people than the escape of some criminals from punishment." United States v. Di Re, 332 U.S. 581, 595 (1948). The accumulation and inspection of vast amounts of personal historical location data, in great excess of anything previously available to the Commonwealth, without any judicial oversight, is a sobering specter. That the court promises Big Brother will be watching only those individuals who once served probationary sentences is of little consolation.

This is not to say that the government should destroy its records after the termination of probation. On the contrary,

the Commonwealth may retain those records indefinitely, and the records well may prove invaluable. Even so, there is a difference between maintaining evidence and searching it. The latter always has required a showing of probable cause and a warrant, at least for those not on probation. I would require the same here.

Hence, I would conclude that, where police engage in a search of a nonprobationer's GPS history, art. 14 and the Fourth Amendment require a warrant supported by probable cause. As police did not procure a warrant in this case, the search is presumptively unreasonable.¹⁸ See Commonwealth v. White, 475 Mass. 583, 588 (2016). It then would be the Commonwealth's burden to "show that [it] falls within a narrow class of permissible exceptions to the warrant requirement," such as probable cause and exigent circumstances (quotation and citation omitted). Id. Because the Commonwealth has not made such a showing, I would reverse the denial of the defendant's motion to suppress.

¹⁸ In denying the defendant's motion to suppress, the judge primarily relied on G. L. c. 276, § 90, which permits police to review probation records "at all times." As the court correctly notes, however, that the Legislature has sought to permit State action by statute does not mean that such action escapes constitutional review. See Commonwealth v. Blood, 400 Mass. 61, 75 (1987) (independently reviewing statute in light of art. 14).

Finally, I call upon the Legislature to revisit G. L. c. 276, § 90, the statute that permits police to examine probation records at any time, including any time after probation has ended. The statute, enacted in 1880 and last amended in 1938, did not contemplate the long-term collection of GPS data. This information now forms part of a probationer's "records." After eighty years, much has changed. The Legislature should consider whether this new and expansive information truly ought to remain open to government inspection, for any purpose and at any time.